



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/083,385	02/27/2002	Satoshi Hirahara	220049US0	4760
22850	7590	09/08/2004	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			VO, HAI	
			ART UNIT	PAPER NUMBER
			1771	

DATE MAILED: 09/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/083,385

Applicant(s)

HIRAHARA ET AL.

Examiner

Hai Vo

Art Unit

1771

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 July 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11, 13-15, 30, 32, 34 and 36-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11, 13-15, 30, 32, 34, 36-41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

1. The art rejections are maintained.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 41 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Support for "the point contact is a particle of a thermosetting resin" is not found in the specification passage as pointed out by Applicants. The passage describes dispersion of a thermosetting particles over the carbonaceous-fiber sheet. Nothing in the passage discloses the thermosetting particles are present in the point contact between carbonaceous fibers.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-11, 13-15, 30, 32, 34, and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miwa et al (US 4,851,304) in view of Koshany et al (US 6,183,898) substantially as set forth in the 04/21/2004 Office Action.

6. Claims 38 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miwa et al (US 4,851,304) and Koshany et al (US 6,183,898), as applied to claim 1 above, further in view of Schultz (US 3,960,601) substantially as set forth in the 04/21/2004 Office Action.
7. Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miwa et al (US 4,851,304) and Koshany et al (US 6,183,898), as applied to claim 1 above, further in view of Kato (US 6,127,059). Miwa is silent as to the carbonized fibers made from twisted yarns substantially as set forth in the 04/21/2004 Office Action.

Response to Arguments

8. The art rejections are maintained for the following reasons. Applicants argue that nowhere in the prior art of record discloses that the prior art fibers are contacted with one another through point contact. The examiner respectfully apologizes for any confusion that may have been caused in the interview conducted on June 1, 2004. The subject matter of claims 12 and 13 should not be allowable over the prior art of record upon further review and consideration. Miwa teaches a porous electrode substrate for fuel cell comprising a carbonaceous fiber mat impregnated with a binder. Miwa also discloses that the carbonaceous fibers dispersed in random directions within substantially two-dimensional plane are bonded to each other with the binder (column 5, lines 30-34). Likewise, it is clearly apparent that the binder is present at the point contact through which the carbonaceous fibers are bonded to one another. It is true that the binder is present at both point contact through which the carbonaceous fibers are bonded to one another and on the entire surface of

each carbonaceous fiber in accordance with the impregnation process of the Miwa invention. However, the language of the claims does not exclude an embodiment where the fiber sheet comprises a binder and carbonaceous fibers, the surface of said carbonaceous fibers being coated with a binder. Further, Applicants argue that the bending resistance and degree of fluffing are not necessarily present based on the assertion that products of identical chemical composition cannot have mutually exclusive properties. Applicants state that the assertion does not make sense since there are many chemical compositions that have the same chemical formula but have substantially different properties. The compounds having the same chemical formula but different isomers (cis or trans) would have substantially different properties. The chemical formula as pointed out by Applicants is completely unrelated to the identical chemical compositions as asserted by the examiner. If the two compounds are made of from identical chemical compositions A, B and C, it is not seen that these two compounds would have substantially different properties. If the chemical composition of the claimed article of manufacture recited in the claims is the same as the identical structure of the prior art, it is immaterial that the applicant recognized different advantages flowing therefrom than did the prior art. ***Ex parte Tummers et al.*** 137 USPQ 444. Further, Applicants argue that resistivity can be affected by the degree of fusing between fibers, thickness of fibers, degree of graphitization and other factors. The arguments are considered moot since the fiber sheet of Miwa has the resistivity meeting the specific range as required by the claims. Applicants argue that in the comparative examples, the resulting fabrics have

volume resistivity or bending resistance outside the scope of the claims when the phenolic resin binder is absent or present in an amount outside the claimed range. The arguments suggest that the resulting fabrics obtained by using the phenolic resin present within the claimed range would substantially have volume resistivity or bending resistance in scope with the claims. Accordingly, the fabrics of Miwa as modified by Koshany, in no doubt, would substantially have bending resistance within the claimed range when the composition comprises the phenolic resin present in the amount within the claimed range. Therefore, the art rejections are thus sustained.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Art Unit: 1771

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai Vo whose telephone number is (571) 272-1485. The examiner can normally be reached on M,T,Th, F, 7:00-4:30 and on alternating Wednesdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HV


TERREL MORRIS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700